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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, HIEN THI

ART UNIT PAPER NUMBER

1764

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,251

Applicant(s)

HARDESTY ET AL.

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.
2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the phrase of "... metallurgically bound ..." is nowhere disclosed in the specification.

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6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, it is unclear as to what structural limitation applicants are attempting to recite and what is intended by "metallurgically bound" and where it is disclosed in the specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 23-24, 27-28, 30-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Kruger (EP 992,659 - corresponding to US 6,555,070).

With respect to claims 23-24, Kruger discloses a catalytic converter comprising:

an exhaust manifold 212 comprising a manifold wall 223-226;

a catalytic converter shell 221; wherein a portion of shell 221 is disposed within the manifold wall 223-226 to form a gas tight seal; and

a catalyst substrate 242 disposed in said catalytic converter shell.

With respect to claim 27, since it is unclear as to what structural limitation applicants are attempting to recite as set forth above, and since the manifold walls are welded to the shells, the apparatus of Kruger meets the claim.

With respect to claim 28, Kruger discloses a retaining feature for retention in said manifold including the bumps (note curved parts near the connection between the shell and the manifold wall).

With respect to claim 30, Kruger discloses a mat support material disposed between the shell and the substrate (col. 7, lines 45-55; col. 12, lines 11-13, 32-35) and a mat protection ring, a portion of the ring is disposed in the manifold wall and a second portion of the ring is in physical communication with the support material (see, for example, Fig. 8).

With respect to claim 31, Kruger discloses that the shell comprising an inner endcone and an outer endcone wherein a portion of each endcone is disposed within the manifold wall (see, for example, Fig. 10).

Instant claims 23-24, 27-28, 30-31 structurally read on the apparatus of Kruger.

10. Claim 32 is rejected under 35 U.S.C. 102(e) as being anticipated by Henry (6,605,259).

Henry discloses a manifold converter comprising: an exhaust manifold 14 comprising a manifold wall; a catalytic converter 12 comprising a catalytic converter shell disposed around a catalyst substrate 24 wherein a portion of the shell is cast within an end of the manifold wall forming a single casting integral piece.

Instant claim 32 structurally reads on the apparatus of Henry.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruger (EP 992,659 - corresponding to US 6,555,070) in view of "3M Interam Mat Product Guide".

The apparatus of Kruger is substantially the same as that of the instant claims, but is silent as to the specific thickness of the manifold wall and the converter shell as claimed.

However, 3M Interam Mat Product Guide discloses the conventionality of providing a manifold wall having a thickness greater than that of the converter shell.

It would have been obvious to one having ordinary skill in the art to select an appropriate thickness for the manifold wall and the converter shell as taught by 3M Interam Mat Product Guide in the apparatus of Kruger on the basis of its suitability for the intended use as a matter of obvious design choice and since it has been held that where the general conditions of a claim are

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disclosed in the prior art, merely discovering the relative dimension involves only routine skill in the art. *In re Gardner v. TEC systems, Inc.* 725 F.2d 1338, 220 USPQ 777.

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruger (EP 992,659 - corresponding to US 6,555,070).

Kruger discloses that the shell and the manifold wall are made of steel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select an appropriate material for each of the converter shell and the manifold wall, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

15. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kruger (EP 992,659 - corresponding to US 6,555,070) in view of Smith et al (5,720,319).

The apparatus of Kruger is substantially the same as that of the instant claim, but is silent as to whether the shell may be cast within the end of the wall instead of welding.

However, the language of the claim appears to be a product-by-process claim and when the patentability of a product-by-process claim is determined, the relevant inquiry is whether the product itself is patentable. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). If a product is the same as or would have been obvious to one having ordinary skill in the art from a product of the prior art, the product is unpatentable even though the prior art product was made by different process. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). Since the product of the instant claim is substantially the same as that of Kruger, it is

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unpatentable even though the product of Kruger was made by different process, e.g. welding of Kruger versus casting of the instant claim.

Furthermore, it should be noted that the method of forming the device is not germane to the issue of patentability of the device itself.

In any event, Smith et al shows the conventionality of utilize casting method in connecting the pieces of elements in the catalytic converter system.

It would have been obvious to one having ordinary skill in the art to alternately select an appropriate method to connect the parts of the device, such as casting taught by Smith et al, in the apparatus of Kruger, for the known and expected results of obtaining the same results in connecting parts of the catalytic converter and such a modification would have involved a mere substitution of known equivalent methods. A substitution of known equivalent methods is generally recognized as being within the level of ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

Response to Arguments

16. Applicant's arguments with respect to claims 23-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Usleman et al, Tanabe et al, Henry, and Shibata et al are cited for showing state of the art.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT
December 8, 2004

Hien Tran
Hien Tran
Primary Examiner
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